No. 200200002

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pure Seed Testing, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR ENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

RYEGRASS, PERENNIAL

'Brightstar SLT'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this nineteenth day of November, in the year two thousand and four.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

of Agriculture

RODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROCTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C 2426).

1. NAME OF OWNER
Pure Seed Testing, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
PST-2A6B

3. VARIETY NAME
Brightstar SLT

4. ADDRESS *(Street and No., or RFD No., City, State, and ZIP Code, and Country)*
P.O. Box 449
Hubbard, OR 97032

5. TELEPHONE *(include area code)*
(503) 651-2130

6. FAX *(include area code)*
(503) 263-0703

FOR OFFICIAL USE ONLY
PVPO NUMBER
2002 00002
FILING DATE
October 2, 2001

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Oregon

9. DATE OF INCORPORATION
1975

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Crystal Rose-Fricker
Pure Seed Testing, Inc.
P.O. Box 449
Hubbard, OR 97032

FEES RECEIVED
FILING AND EXAMINATION FEES:
$ 2705
DATE 10/2/2001
CERTIFICATION FEE:
$ 432
DATE 9/27/04

11. TELEPHONE (Include area code)
(503) 651-2130

12. FAX (Include area code)
(503) 263-0703

13. E-MAIL
crystal@turf-seed.com

14. CROP KIND (Common Name)
Perennial Ryegrass

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

- a. ☒ Exhibit A. Origin an Breeding History of the Variety
- b. ☒ Exhibit B. Statement of Distinctness
- c. ☒ Exhibit C. Objective Description of Variety
- d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
- e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
- g. ☒ Filing and Examination fee ($2,705), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act)

☐ YES *(If "yes," answer items 20 and 21 below)* ☒ NO *(If "no," go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? ☒ YES ☐ NO

IF YES, WHICH CLASSES? ☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS? ☒ YES ☐ NO

IF YES, SPECIFY THE NUMBER 1, 2, 3, *etc.* 6 ☒ FOUNDATION 6 ☒ REGISTERED 7 ☒ CERTIFIED

(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES?

☒ YES ☐ NO

IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSTION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)?*

☐ YES ☒ NO

IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER	NAME *(Please print or type)*	CAPACITY OR TITLE	DATE
Crystal Rose-Fricker	**Crystal Rose-Fricker**	**President**	**9/26/01**
SIGNATURE OF OWNER	NAME *(Please print or type)*	CAPACITY OR TITLE	DATE
	Joseph K. Wipff, Ph.D.	**Taxonomist/Plant Breeder**	**9/26/01**

S&T-470 (2-99) designed by the Plant Protection Office with WordPerfect 6.0a. Replaces STD-470 (6-98) which is obsolete. *(See reverse for instructions and information collection burden statement)*

1

INSTRUCTIONS

200200002

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,705 ($320 filing fee and $2,385 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more that 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $320 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvp.htm

ITEM

18a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified.

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences;
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if **"No"** has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

21. *See Section 83 of the Act for the Contents and Term of Plant Variety Protection.*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

3/21/01 Sold to Brett Young Seeds 8,000#

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the applicant/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center—East, Beltsville, MD 20705. Telephone: (301) 504-8089.

S&T-470 (2-99) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (6-98) which is obsolete.

Exhibit A.
Ammendment to Origin and Breeding History of Brightstar SLT Perennial Ryegrass

Brightstar SLT perennial ryegrass is an advanced generation synthetic cultivar. Pure Seed Testing, Inc. developed Brightstar SLT by intercrossing plants from three perennial ryegrass populations during the spring of 1999. Brightstar SLT was tested under the experimental designation PST-2A6B.

The first population was comprised of 1000 plants from 'Brightstar II' that were selected as seedlings that germinated in a greenhouse salt bath at 15 g L^{-1} NaCl. The second population was designated 2FXX Brightstar II. This population was derived from a polycross of 21 plants selected from Brightstar II, 21 plants selected from 'Charger II', 12 plants selected from 'Chaparral', 11 plants selected from 'Catalina' and six plants selected from 'Roadrunner'. These 71 plants were selected from Foundation seed plantings in the Oregon Willamette Valley. Plants were selected for dark color, high crown density, high seed production and good resistance to crown rust (caused by *Puccinia coronata* Corda) and stem rust (caused by *P. graminis* Pers.:Pers.) during the spring of 1998. These 71 plants were transplanted into an isolated polycross nursery near Hubbard and allowed to interpollinate during the summer of 1998. Seed was harvested from the 21 Brightstar II plants, bulked and designated 2FXX-Brightstar II.

The third population used in the development of Brightstar SLT was designated 2A6E and was selected for early maturity, upright growth habit, dark color and stem rust resistance. This population was developed from selected plants from A96 sources from the New Jersey Agricultural Experiment Station of Rutgers University. During the spring of 1997, 28 plants from 15 A96 sources were selected and placed into an isolated polycross near Hubbard. In July 1997, 20 of these plants were removed from the polycross based on high susceptibility to stem rust. The eight remaining plants were from the following sources: A96-306 (2 plants), A96-315 (2 plants), A96-316 (2 plants), A96-317 (1 plant) and A96-333 (1 plant). These plants were allowed to interpollinate during the summer 1998 and seed was subsequently harvested from each plant. A96-306 traced its maternal origin to a plant collected at 4 Delaware Drive, East Brunswick, NJ. A96-315, A96-316, and A96-317 traced their maternal ancestry to a plant that was

collected from the Rutgers University Gold Course, Piscataway, NJ in 1991 and contained a fungal endophyte (*Neotyphodium lolii* Latch, Christensen & Samuels). A96-333 traced its maternal origin to plant PR92-210 from Rutgers.

During the fall of 1998, seed from the three populations described above were used to establish an isolated 5650-plant nursery, designated 2A6B, near Hubbard. Seedlings from these populations were planted in alternating rows of Brightstar II salt germination (1000 plants), 2FXX Brightstar II (2250 plants) and 2A6E (2400 plants). The nursery was rogued to uniformity of plant type and maturity prior to anthesis and remaining plants were allowed to interpollinate. Seed was subsequently harvested from 841 plants to produce the first Breeder seed of Brightstar SLT during the summer of 1999. Of the 841 harvested plants, 398 traced their origin to 2FXX Brightstar II, 293 traced their origin to 2A6E and 150 traced their origin to Brightstar II salt germination.

Seed propagation of Brightstar SLT is limited to three generations of increase from Breeder seed: one each of Foundation, Registered and Certified. Pure Seed Testing, Inc. maintains Breeder seed in Oregon.

Brightstar SLT is a stable and uniform variety. Breeder seed is maintained by Pure Seed Testing, Inc. Less than 5% off-types or variants have been observed in the reproduction or multiplication from breeder seed to foundation seed. Brightstar SLT perennial ryegrass and the parents of Brightstar SLT have produced turf and seed fields of equal quality, acceptable uniformity and good stability.

BRIGHTSTAR SLT BREEDER HISTORY

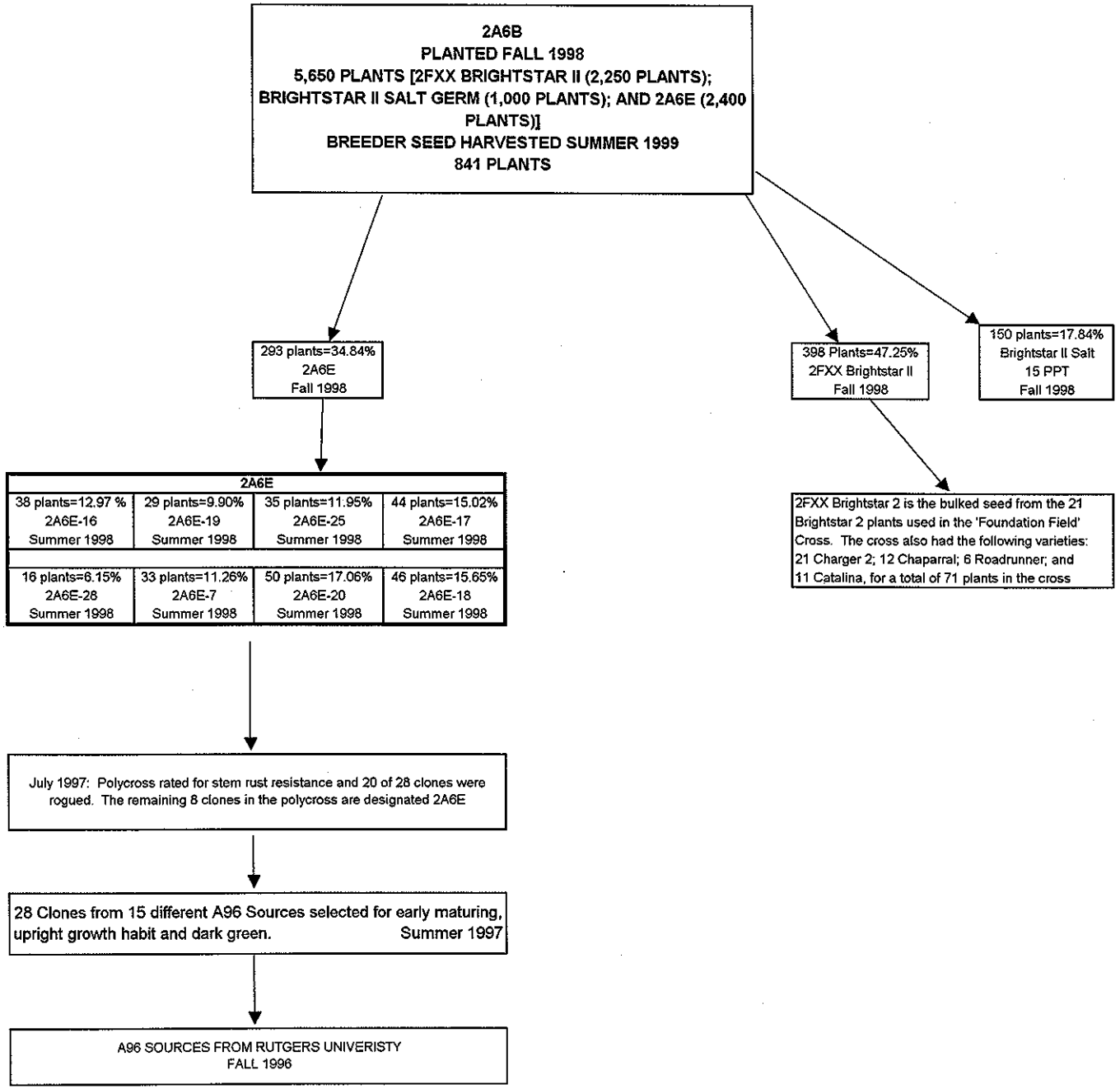

Exhibit B.

Novelty Statement for Brightstar SLT (PST-2A6B) Perennial Ryegrass

Brightstar SLT is most similar to Brightstar II, however, close comparison shows the following differences.

1. Brightstar SLT has a plant height 2.7 cm taller than Brightstar II (Tables 1 and 2).

2. Brightstar SLT has at least 1.6 more spikelets per spike than Brightstar II (Tables 1 and 2).

The following characteristics were also noted to have differences:

	Brightstar SLT	vs	Brightstar II
% Plants w/leaf sheath anthocyanin	24%		95%
Leaf color; 9 = darkest	6.0		8.0-8.4
% Plants w/smooth rachis	98%		60%
% Plants w/rough rachis	2%		40%
% Plants w/awns	24%		0%
% Plants w/yellow anthers	100%		20%
% Plants w/white anthers	0%		80%

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY PROGRAM
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(RYEGRASS)

OBJECTIVE DESCRIPTION OF VARIETY
RYEGRASS
(*Lolium* spp.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Pure Seed Testing, Inc.	PST-2A6B	Brightstar SLT

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)

P.O. Box 449
Hubbard, OR 97032

FOR OFFICIAL USE ONLY
PVPO NUMBER
200200002

Place the appropriate number that describes the varietal characteristics of this variety in the boxes below. Use leading zeroes when necessary (e.g. 089). Descriptions of characters should represent those that are typical for the variety. Ranges may be given also. Measured data should be for SPACED PLANTS. Give additional description for all characteristics that cannot be adequately described in the form below. Append all pertinent comparative trial and evaluation data. The symbol "." indicates decimal.

1. SPECIES:

[2] 1 = *L. multiflorum* (annual or italian: includes Westerwoldicum) 2 = *L. perenne* (perennial) 3 = *L. rigidum* (includes Wimmeria)

4 = Hybrid (of species): _____ 5 = Other (Please specify): _____

2. PLOIDY:

[1] = Diploid 2 = Tetraploid 3 = Other (Please specify): _____

3. DURATION:

7 and 8/18/04 3 [A] 1 = Annual or Biennial 2 = Short lived perennial (3-4 years) 3 = Perennial (more than 4 years)

STANDARD CULTIVARS

1 = GULF 2 = WIMMERIA 62 3 = LINN 4 = PELO
5 = NORLEA 6 = ABERYSTWYTH S-23 7 = MANHATTAN 8 = PENNFINE

4. MATURITY (50% HEADED) Use standards from above for comparison: (See Table 8)

[3] 1 = Very Early 3 = Early 5 = Medium 7 = Late D CULTIVAR

[ ][ ] DAYS EARLIER THAN ... [1][1]

[ ] STANDARD CULTIVAR [8]

5. MATURE PLANT HEIGHT (Use standard cultivars from above): (See Table 1)

[6][1].[5] cm High [4][9][0] cm Shorter than..... [8] STANDARD CULTIVAR

[ ][ ][ ] cm Taller than..... [ ] STANDARD CULTIVAR

6. **PERCENT WINTER DAMAGE (estimated as percent of the area appearing dead. Use standard cultivars from above for comparison):**

20020002

[0][0][0] Percent Damage of Application Cultivar

[0][0][0] Percent Damage of ..... [8] STANDARD CULTIVAR

7. **TURF DENSITY (Use standard cultivars from above):** #12.7 cm section (See Table 1)

[4][9][1] Tillers per 100 square cm

[ ][ ][ ] Less tillers per 100 square cm than ... [ ] STANDARD CULTIVAR

[0][8][7] More tillers per 100 square cm than ... [8] STANDARD CULTIVAR

8. **FLAG LEAF (at full growth, use standard cultivars from above):** (See Table 1)

[1][2][3] cm Length (from ligule to tip) [ ][2.][2] mm Width (at widest point)

[ ][1][2] cm Shorter than ..... [8] STANDARD CULTIVAR

[ ][ ][ ] cm Longer than ..... [ ] STANDARD CULTIVAR

[ ][ ][.4] mm Narrower than ..... [8] STANDARD CULTIVAR

[ ][ ][ ] mm Wider than ..... [ ] STANDARD CULTIVAR

[3] Flag Leaf at Boot Stage

1 = Deflexed
3 = Recurved
5 = Horizontal
7 = Semi-Erect
9 = Erect

9. **LEAVES:**

[3] Vernation: 1 = Leaves rolled in young shoots; 2 = Leaves semi-rolled (folded with rolled edges); 3 = Leaves folded in young shoots

[24] % Plants with anthocyanin in lower leaf sheath

[4] Foliage Color: 1 = Yellow Green; 2 = Medium Green; 3 = Blue Green; 4=Dark

10. **SPIKE:** (See Table 1)

[1][2][2] mm Spike length (tip to internode below lowest floret)

[ ][2] mm Shorter than ..... [8] STANDARD CULTIVAR

[ ][ ] mm Longer than ..... [ ] STANDARD CULTIVAR

[1][7][9][0] mg per ten spikes (trimmed to internode below lowest floret)

[ ][3][1][0] mg lighter per ten spikes than ..... [8] STANDARD CULTIVAR

[ ][ ][ ] mg heavier per ten spikes than ..... [ ] STANDARD CULTIVAR

[ ][ ] florets per spikelet

PERCENTAGE OF PLANTS WITH:

Rachis: [9][7][.5] % Smooth [ ][2.][5] % Rough

Spike Color: [9][2][.5] % Green [ ][7.][5] % Purple

Lemma: [ ][2][4] % Awned

[ ][ ][ ] mm Awn length [6.][8] mm Glume length

200200002

10. SPIKE (*Continued*)

[2] 1 = Spikelet length nearly equal to outer glumes
2 = Spikelet length much longer than outer glumes

11. COLEOPTILE:

[ ][ ][ ] % Plants with anthocyanin in coleoptile

12. ANTHER COLOR:

[ ][ ][ ] % Plants with white anthers [1][0][0] % Plants with yellow anthers

[ ][ ][ ] % Plants with purple anthers

13. ROOT AND PLANT CHARACTERS:

[0][0][0] % Plants with prostrate growth habit

[ ][<][2] % Plants with flourescent roots

[1][0][0] % Plants with upright growth habit

14. SEED:

[1][6][8][3] mg per 1000 seeds [ ][4.5] mm Total Length of 10 seeds [1.][1][5] mm Total Width of 10 seeds

15. DISEASE (0 = Not Tested, 2 = Highly Susceptible, 4 = Moderately Susceptible, 6 = Moderately Resistant, 8 = Highly Resistant)

[7]	Crown Rust (*Puccinia coronata*)	[0]	Dollar Spot (*Sclerotinia*)
[6]	Brown Patch (*Rhizoctonia*)	[7]	Leaf Spot (*Helminthosporium*)
[5]	Mildew	[0]	Snow Mold (*Typhula*)
[6]	Red Thread (*Corticium*)	[ ]	Other (Please Specify): _____

16. INSECT (0 = Not Tested, 2 = Highly Susceptible, 4 = Moderately Susceptible, 6 = Moderately Resistant, 8 = Highly Resistant)

[0] Please Specify: _____

17. Give resemblance value in left column and variety code number in right column for variety with which comparison is made (1 = less than, 2 = same as, 3 = more erect, more resistant, denser, more persistent, darker or greater height.):

Resemblance	Character	Similar Variety	
[1]	Plant Habit (erectness)	[8]	1 = GULF
[3]	Tillering	[8]	2 = WIMMERIA 62
[3]	Winter hardiness	[8]	3 = LINN
[3]	High Temperature Stress Resistance	[8]	4 = PELO
[3]	Turf Persistence	[8]	5 = NORLEA
[3]	Plant Color	[8]	6 = ABERYSTWYTH S-23
[1]	Vertical Seeding Growth Rate	[8]	7 = MANHATTAN
[3]	Crown Density	[8]	8 = PENNFINE
[1]	Mower Shredding Resistance	[8]	

18. GIVE AREA OF ADAPTATION AND INTENDED USE: 20020002

19. GIVE AREA TEST RESULTS PRESENTED FROM:

20. COMMENTS:

Exhibit D.

Additional Description of Brightstar SLT (PST-2A6B) Perennial Ryegrass

1. Brightstar SLT has excellent turf quality (Table 3).
2. Brightstar SLT has good resistance to red thread (Table 4).
3. Brightstar SLT has good resistance to stem rust (Table 5).
4. Brightstar SLT has excellent salt tolerance (Table 6).
5. Brightstar SLT has good color in overseeding trials over dormant Bermuda (Table 7).

Table 1. 2001 mean morphological measurements for entries in a perennial ryegrass seed yield trial seeded fall of 1999 near Hubbard, OR.

Entry	Plant Height (cm)	Spikelets/ Spike (#)
Pennfine	85.3	24.1
Brightstar SLT (PST-2A6B)	**78.1**	**23.1**
Brightstar II	75.4	20.0
LSD (0.05)	**2.6**	**1.2**

Table 2. 2001 mean morphological measurements for entries in a perennial ryegrass seed yield trial seeded fall of 2000 near Hubbard, OR.

Entry	Plant Height (cm)	Spikelets/ Spike (#)
Brightstar SLT (PST-2A6B)	**81.6**	**23.7**
Brightstar II	76.4	22.1
LSD (0.05)	**2.9**	**1.4**

Table 1. 2000 mean morphological measurements for entries in a perennial ryegrass spaced-plant trial planted fall of 1999 near Hubbard, OR.

Entry	Plant Height (cm)	Top Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Spike Length (cm)	Spikelet Length (mm)	Glume Length (mm)	Spikelets/ Spike (#)	Florets/ Spikelet (#)	Awn Length (mm)	Tiller Leaf Length (cm)	Tiller Leaf Width (mm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Tiller Count (#/12.7 cm Row)
Pennfine	66.4	30.9	11.9	18.6	12.4	8.7	20.2	7.3	0.2	13.2	2.4	13.5	2.6	403.6
Brightstar SLT (PST-2A6B)	**61.5**	**33.2**	**10.5**	**16.3**	**12.2**	**6.8**	**18.8**	**7.3**	**0.2**	**13.2**	**2.1**	**12.3**	**2.2**	**490.8**
Brightstar II	57.7	30.1	9.9	17.0	12.3	7.2	21.2	7.2	0.4	13.3	2.4	12.2	2.6	473.4
LSD (0.05)	**4.0**	**3.3**	**0.7**	**1.9**	**1.0**	**0.5**	**1.4**	**0.6**	**0.1**	**1.0**	**0.2**	**1.9**	**0.3**	**73.9**

Table 2. 2001 mean morphological measurements for entries in a perennial ryegrass seed yield trial seeded fall of 1999 near Hubbard, OR.

Entry	Spikelets/ Spike (#)
Pennfine	24.1
Brightstar SLT (PST-2A6B)	**23.1**
Brightstar II	20.0
LSD (0.05)	**1.2**

Table 4. 2000 mean turf quality and 2001 red thread ratings for entries in a perennial ryegrass turf trial seeded fall of 1999 near Hubbard, OR. (9 = ideal quality; no disease)

Entry	Red Thread	Turf Quality
PST-2BR	6.7	6.8
PST-2CRL	7.0	6.5
PST-21N	5.0	6.5
ABT-753	5.7	6.4
CIS-PR78	6.7	6.3
ABT-903	5.7	6.3
CIS-PR69	6.8	6.2
CIS-PR85	5.2	6.2
CIS-PR84	5.3	6.1
Brightstar SLT (PST-2A6B)	**6.0**	**6.1**
PST-2L96	5.3	6.1
2PC Bulk	6.3	6.1
Pizzazz	5.5	6.0
ABT-633	5.2	6.0
B-2	5.3	5.9
SRX-4801	5.5	5.9
SRX-4520	6.2	5.9
2QV Bulk	4.2	5.9
Prizm X LRF	4.7	5.9
SRX-4RHT	5.3	5.9
Promise	5.7	5.8
Prizm-99 x LRF	5.8	5.8
Palmer III x Saturn II	5.7	5.7
Brightstar II	5.7	5.7
PST-2LA	5.3	5.7
PST-2M4	6.3	5.7
PST-2WN	5.5	5.7
2CUL Bulk	5.5	5.7
Barlenium	6.3	5.7
PST-2SLX	5.8	5.7
LRF X Prizm	5.7	5.6
Catalina	5.0	5.6
ABT-461	4.8	5.6
PST-2SBE	5.7	5.6
Brightstar	5.0	5.6
R8000	5.2	5.6
Paragon	5.3	5.5
ABT-724	7.0	5.5
PST-2JH	5.8	5.5
Wilmington	4.7	5.5
ABT-721	5.7	5.5
PST-2GT	4.8	5.5
Palmer III	5.3	5.5
ABT-834	6.3	5.5
MP 107	4.2	5.4
Omega III	5.5	5.4
PST-2CRR	5.2	5.4
2A6E x Brightstar II	6.3	5.4
SRX-4500	5.3	5.4
Calypso II	6.2	5.4
2MCB Bulk	4.0	5.3
Brightstar II X 2A6E	6.3	5.3
Chaparral	4.7	5.3
Pearl	5.2	5.3
MP 103	3.5	5.3
Chaparral E-	4.5	5.2
Pace	6.2	5.2
Premier II	4.7	5.2
ABT-960	5.8	5.2

Table 4. 2000 mean turf quality and 2001 red thread ratings for entries in a perennial ryegrass turf trial seeded fall of 1999 near Hubbard, OR. (9 = ideal quality; no disease) [Cont'd]

Entry	Red Thread	Turf Quality
PST-22M	5.5	5.2
057 Mt. View	5.3	5.2
Pick 1-94	5.5	5.2
PST-CATS	5.8	5.2
CIS-PR75	5.2	5.1
2QTL Bulk	6.2	5.1
3PT Bulk	5.3	5.1
Majesty	4.2	5.1
PST-216R	4.8	5.1
ABT-629	5.2	5.1
Charger II	5.3	5.1
CIS-PR80	5.0	5.1
SRX-4120	5.3	5.1
AG-P981	4.3	5.1
Saturn II X Palmer III	4.3	5.1
Fiesta 3	3.5	5.0
Saturn II	4.0	5.0
2SLW	5.2	5.0
Pirouette	5.3	5.0
Passport	4.5	5.0
ABT-709	5.0	5.0
PST-22L	5.8	4.9
Shining Star	5.5	4.9
PST-216C	4.8	4.9
PST-2RT	5.7	4.9
Alliance	6.3	4.9
Racer	5.2	4.9
Linedrive	4.5	4.9
PST-2CT	5.5	4.8
2TN-98 Bulk	5.2	4.8
Allsport	4.8	4.7
Quick Trans	6.0	4.7
Divine	4.7	4.7
Navajo	4.5	4.7
Quickstart	5.3	4.7
PST-3BKM	6.8	4.6
Charger	4.7	4.6
Ascend	4.2	4.6
PST-2R4B	4.2	4.6
Citation III	4.5	4.6
Manhattan III	5.2	4.6
PST-2R7	5.2	4.5
Headstart	5.2	4.4
PST-2R4	5.0	4.4
PST-22E	5.3	4.4
Premier	4.7	4.3
Edge	6.2	4.1
PST-2HCR	5.2	4.1
Affinity	4.2	3.9
Evita	4.0	3.7
Buccaneer	5.2	3.6
Sunrye	5.0	3.6
Rhapsody	5.7	3.4
Yatsu Green	5.8	3.3
Linn	5.0	2.0
30G	4.3	1.7
LSD (0.05)	**1.7**	**0.8**

At Pure Seed Testing, Inc., we are able to develop perennial ryegrass varieties with both good turf quality and stem rust resistance that allows higher economic seed production levels. A Folicure/Bravo mixture and Quadris fungicides were applied at separate times on the 1999 single row Commercial seed yield trial to allow stem rust susceptible varieties to produce some seed. Stem rust ratings were taken on the front 1' of each row that was left unsprayed. A 5.0 rating for stem rust means 50% of the plant is infected, a 1.0 rate on the plant is dead and an 8.0 rating is less than 10% stem rust. Varieties with stem rust ratings of six and higher would have little change in seed yield with no fungicide applications. However, varieties rating below a five in this data table would have significant decreases in yield if they were not sprayed with fungicides. Other research programs are able to develop improved turf quality but lack stem rust resistance.

The varieties of ryegrass on this page are organized for resistance to stem rust. This table also shows seed yield. These factors are elemental in determining profitability to growers. Yield x price (-) expenses = profit. Turf quality is very basic in variety acceptance but doesn't enter the formula after a sale is made.

Pure Seed does mass selection for rust resistance and seed yield. Many varieties rate well for turf quality but are uneconomical to grow.

Table 5. Perennial Ryegrass Data

	1999 Perennial Ryegrass Single Row Commercial NTEP Seed Yield Trial		1999 Perennial Ryegrass Turf Trial
Entry	**2000 Avg lbs/Acre**	**2000 Stem Rust 9=No Rust AVG.**	**2000 Mean Turf Quality**
PST -2CRL	930.2	8.0	6.5
PST- 216	996.5	8.0	5.1
PST- 2CRR	1,138.3	8.0	5.4
QUICK TRANS	1,244.9	8.0	4.7
PST -2SBE	1,046.9	7.8	5.6
PST-2LA	1,134.0	7.8	5.7
PST -CATS	1,861.2	7.5	5.2
PST -2M4	1,013.8	7.3	5.7
PST- 2SLX	763.2	7.0	5.7
CITATION FORE	835.2	6.8	6.8
BRIGHTSTAR SLT	**1,213.2**	**6.8**	**6.1**
ABT 99-4-633	1,189.4	6.5	6.0
MANHATTAN 3	1,231.2	6.5	4.6
CATALINA	841.0	6.3	5.6
ABT 94-4-709	1,450.8	6.3	5.0
CHARGER II	1,481.8	6.3	5.1
WILMINGTON	1,094.4	6.0	5.5
BARLENNIUM PRG	1,268.6	6.0	5.7
MP 103	995.8	5.8	5.3
LINE DRIVE PIR	1,420.6	5.8	4.9
ABT 99-4-461	1,080.0	5.5	5.6
ASCEND	1,194.5	5.5	4.6
PASSPORT	1,483.9	5.5	5.0
PICK PR 194	1,090.8	5.3	5.2
PACE PRG	987.8	5.0	5.2
ABT 99-4-629	1,511.3	5.0	5.1
PROMISE	810.7	4.8	5.8
BUCCANEER	1,291.7	4.8	3.6
PREMIER	1,578.2	4.8	4.3
ABT 99-4-834	815.0	4.5	5.5
CIS PR 75	856.8	4.3	5.1
057 MT. VIEW PRATUM	872.6	4.3	5.2
DIVINE	1,109.5	4.3	4.7
ALLSPORT	1,510.6	4.3	4.7
FIESTA 3	956.2	4.0	5.0
CIS PR 78	812.2	3.8	6.3
PIROUETTE	861.8	3.8	5.0
CIS PR 80	1,057.0	3.8	5.1
SRX 4RHT	604.8	3.5	5.9
SRX 4820	674.6	3.5	5.9
PALMER III	1,081.4	3.3	5.5
PEARL SL	1,272.2	3.3	5.3
HEADSTART	1,211.8	3.0	4.4
ABT 99-4-721	1,213.9	3.0	5.5
LINN	1,237.7	2.8	2.0
YATSU GREEN	1,440.7	2.8	3.3
PIZZAZZ	997.9	2.5	6.0
CALYPSO II	1,023.1	2.5	5.4
SRX 4500	884.9	2.3	5.4
AFFINITY	1,039.0	2.0	3.9
EDGE	1,066.3	2.0	4.1
LSD (0.05)		2.4	0.8

Table 6. 2000 Salt Screening of National Perennial Ryegrass. Screened at ca. 17,000 ppm salinity for nine weeks. Rating taken November 28, 2000

Entry	Salt Damage 0 to 3*	Survivors % alive
BRIGHTSTAR SLT (PST-2A6B)	**1.04**	**84**
PST-216	0.82	77
B-2	0.82	75
FIESTA III	0.75	74
PST-2SLW	0.89	73
CATALINA	0.80	73
HEADSTART	0.74	71
PST-3BK	0.74	71
PST-2BR	0.72	71
MP-103	0.70	71
MANHATTAN 3	0.84	69
BARLENIUM	0.70	69
RACER	0.74	69
PST-2LA	0.72	69
LINE DRIVE	0.67	68
CALYPSO II	0.72	63
MAJESTY	0.68	63
PIROUETTE	0.67	63
PST-2PC	0.64	63
PST-2CRL	0.62	61
PST-2M4	0.59	60
PASSPORT	0.64	58
PST-2SLX	0.60	58
PST-2RT	0.57	57
PST-2CRR	0.58	57
PREMIER II	0.55	57
PST-2SBE	0.57	57
DIVINE	0.56	57
PIZZAZZ	0.56	53
EDGE	0.51	51
PARAGON	0.47	46
CHARGER II	0.50	45
PALMER III	0.46	44
PST-CATS	0.44	43
AFFINITY	0.42	43
BRIGHTSTAR II	0.42	42
ALLSPORT	0.41	40
BUCCANEER	0.38	38
MP-107	0.35	36
PREMIER	0.60	35
PROMISE	0.32	32
LINN	0.27	28
YATSU GREEN	0.29	26
ASCEND	0.24	26
WILMINGTON	0.34	25

L.S.D.	0.3096

* 3= 60.1-100% Green Tissue
2= 29.1-60% Green Tissue
1 = 1-29% Green Tissue
0 = Dead

Table 7. Mean turf quality, color, and percentage cool-season grass ratings for entries in a winter overseeding turf trial seeded fall of 1999 at West Coast Turf Sod Farm near Scottsdale, AZ. (9=ideal quality; dark green color)

Entry	Turf Quality (through 10 May, 2000)	Color (10 May, 2000)	% Cool-Season Grass (10 May, 2000)
PST-2BR	7.2	7.7	63.3
PST-2CRL	7.0	7.3	63.3
PST-2R4	5.4	4.7	53.3
Brightstar SLT (PST-2A6B)	**6.5**	**6.0**	**50.0**
PST-2CRR	5.9	5.3	48.3
Winterplay *Poa trivialis*	4.1	2.7	48.3
Winterstar *Poa trivialis*	4.4	3.3	46.7
21N Bulk	6.3	7.0	45.0
PST-22L	5.6	6.7	45.0
Chaparral	6.9	5.3	45.0
Brightstar II	5.7	5.0	43.3
PST-2LA	5.3	5.3	43.3
PST-2SBE	5.7	6.0	41.7
PST-2M4	5.1	4.7	40.0
Citation III	6.1	6.0	40.0
30% Winterstar, 70% Charger II	4.6	3.3	38.3
30% Winterplay, 70% Brightstar II	4.6	3.3	38.3
PST-2L96	5.6	5.7	36.7
PST-22M	5.9	5.3	36.7
Charger II	5.0	4.7	36.7
PST-2JH	5.2	4.3	36.7
PST-CATS	6.1	6.0	36.7
Quickstart	4.7	4.0	35.0
2QTL Bulk	5.2	4.7	35.0
Catalina	5.7	4.7	35.0
22E Bulk	5.8	4.0	35.0
30% Winterstar, 70% Brightstar II	4.6	4.7	35.0
Alliance	4.6	4.7	33.3
PST-2SLX	6.1	5.3	33.3
PST-2RT	4.8	4.0	33.3
2QTE Bulk	4.8	4.7	30.0
Manhattan 3	4.8	4.3	28.3
Sunrye	4.7	2.7	28.3
Charger	4.4	3.7	26.7
10% Shade Star, 90% Brightstar II	4.5	4.0	26.7
5% Shade Star, 95% Brightstar II	5.7	6.0	26.7
2QTM Bulk	5.2	4.3	23.3
PST-3BKM	6.1	4.7	21.7
Quick Trans	6.0	3.7	21.7
CDM-99 crested dogtail	3.9	2.3	20.0
2AP Bulk intermediate ryegrass	4.0	3.3	18.3
30G intermediate ryegrass	2.8	2.0	16.7
LSD (0.05)	**0.8**	**1.6**	**17.6**

Table 8. 2000 mean initial heading dates for entries in a perennial ryegrass spaced-plant trial planted fall of 1999 near Hubbard, OR.

Entry	Mean
Pennfine	02 May
Brightstar SLT (PST-2A6B)	**13 May**
LSD (0.05)	**3 days**

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055 EXPIRES: 12-31-96

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C.652a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Pure Seed Testing, Inc.	**PST-2A6B**	**Brightstar SLT**
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*	5. TELEPHONE *(include area code)*	6. FAX *(include area code)*
P.O. Box 449 **Hubbard, OR 97032**	**(503) 651-2130** 7. PVPO NUMBER 200200002	**(503) 263-0703**

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company?
If no, give name of country _____ ☒ YES ☐ NO

10. Is the applicant the original breeder? If no, please answer the following: ☒ YES ☐ NO
   a. If original rights to variety were owned by individual(s):
   Is (are) the original breeder(s) a U.S. national(s)? If no, give name of country

   b. If original rights to variety were owned by a company: ☒ YES ☐ NO
   Is the original breeder(s) U.S. based company? If no, give name of country

11. Additional explanation on ownership *(If needed, use reverse for extra space):*

PLEASE NOTE:

Plant variety protection can be afforded only to owners (now licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.